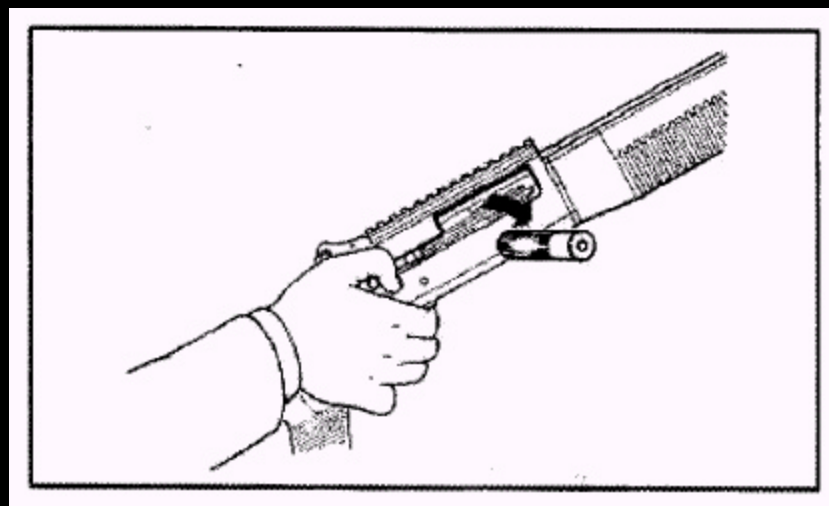




Balance of Power



JSCS 12-GA Point Control Feasibility Study

Presentation By: Shawn Spickert-Fulton



Most riot control actions occur at a distance of less than 40 ft.



12-GA M1014 Shotgun Feasibility Study

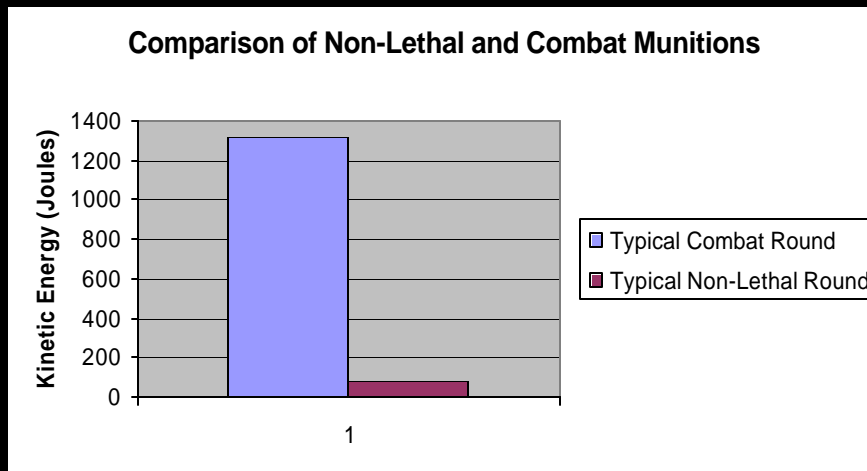


● Purpose:

To investigate the development of a cost-effective, 12-gauge non-lethal point control blunt trauma cartridge that can be routinely and effectively fired semi-automatically from the M1014 Joint Service Combat Shotgun with no detrimental effects to the weapon or operator.



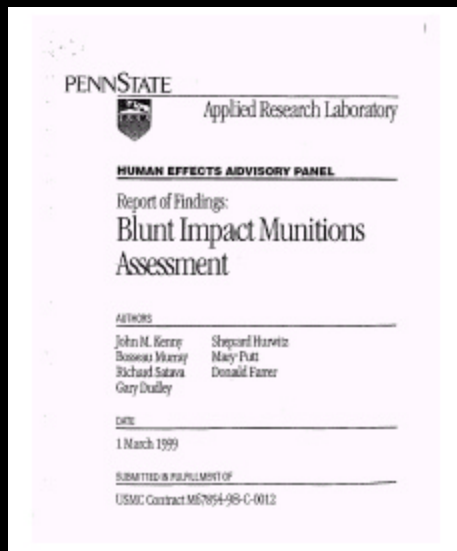
The Problems



- Lethal vs. Non-Lethal Ammunition Characteristics
- M1014 JSCS Characteristics
- Targets and Operating Conditions



Determination of Lethality



- Clay Deformation
- Ballistic Gelatin
- Three Rib Model
- Other (Finite Element, VC, Sturdivan, etc)



Project Objectives

- Explore definition of “non-lethal”
- Develop common kinetic energy test criteria for 12-GA non-lethal munitions
- Conduct commercial feasibility studies for cycling non-lethal rounds semi-automatically through the joint service combat shotgun
- Conduct in-house research to complement commercial findings



Program Metrics

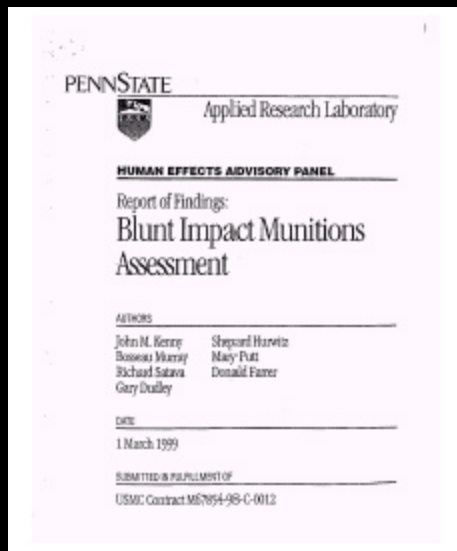
- Define non-lethal parameters
- Obtain interested commercial developers and researchers
- Establishment of baselines for semi-automatic functionality
- Conduct tests on modified munitions
- Conclusions and recommendations



- Aberdeen Analysis
- Picatinny Analysis
- Commercial Industry Analysis



Determination of Lethality



- Clay Deformation
- Ballistic Gelatin
- Three Rib Model
- Other (Finite Element, VC, Sturdivan, etc)



Concept Explorations

- Parasitic Mass
- Increased Aerodynamic Drag
- Projectile Material Variations
- Projectile Construction Variations
- Propellant Alterations and Chemical Additives



Preliminary Findings

- No COTS at this time
- Prototypes show promise but have issues which need to be explored and resolved further.
- Lethality criteria is very subjective and is likely to remain so. However, there is some consensus growing in certain areas.



On-going Activities

- American System Corporation is analyzing the data from the sub-contractors
- ARDEC lab trials are being conducted at ATF
- Final report & meeting scheduled for end of May



Acknowledgements

American System Corporation

Defense Technologies

TSG Ammo

National Institute of Justice

ATG (Aberdeen Proving Grounds)

TACOM ARDEC